Work Order ID 9 October-05-12 9:14:11 AM		5. 1	*91	269*		-	•	•	Pag	ge l
Item ID: 646.9910 Revision ID: Item Name: Strut Start Date: 10/05/12 Required Date: 10/31/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*	Accept	*N900 Cust Iten Customer	ı ID:	100*	Setup	Start Stop	*NS1* *NS2*	
Approvals: Process P QC:	lan: _ MLゴ	Date: 12-10-	Oo Tooling: SPC (Y/N):		Date:	· · · · · · · · · · · · · · · · · · ·	Run	Start Stop	*NR1*	
	Operation Description evision Nbr		Set Up/ Run Hour	Tool ID	Tool #	Plan Ac Code Q			teject Insp. Iumber Stamp	<u>)</u>
*110 * Doosan Lathe	Cut on chemo TURN AS PEI DWG REV: FOLIO REV: DEBURR	R DWG	0.00 .125 inches 0.00	- QY (2)12/18	***		4	· · · · · · · · · · · · · · · · · · ·		(2) (S! es.2
120 *120* QC Quality Control	QC2- Inspect parts off mac	hine FAI/FAIB	0.00	12/12/18		.—	-			_ \$\forall 0 \\$\forall 2 \\$\forall 2 \\$\fo

NCR: Yes	/ No	·		WORK ORDER NON-	-CONFOR	MANCE / UF	PDATE	DQA:	•	
								QA Closed:	Date:	
Work Order:				DISPOSITION			AGAINST DE	PARTMENT,	/PROCESS	
Part No.				Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Description of work order update	Initial	į.	ction	Sign &		
Cause	Date	Step	Qty	or Non-conformance	Chief Eng	g Des	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other										
Process										
Supplier Training Unapproved										

Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure Cracks Broken/Damaged Inspection Incomplete Part Incorrect Weld Crushed/Crimped. Burrs Instructions Incomplete/Unclear Wrong Stock Pulled Part Lost/Missing Cuffs Contamination Maintenance Part Moved Countersink Mislabeled Positioned Wrong Heat Treat Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Other Ripples in Bend Drill Holes Offset Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Finish Out of Sequence Wave/Twist in Tube Folio Outside Dimensions

FAULT CATEGORY

General

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Landing Gear

Work Orde				*912	69*						Page 2
Item ID: Revision ID: Item Name: Start Date:	646.9910 Strut 10/05/12	Start Qty: 4.00	*4*	Accept	*N900		100)*	Setup Star Sto	I ZI	S1* S2*
Required Date: Reference:		Req'd Qty: 4.00	*4*		Customer:	υ.					
Approvals:	Process Pl	an:	Date:	Tooling:	Da	ite:		F	Run Star	^t *N	R1*
	QC:		Date:	SPC (Y/N):		ite:			Sto	*N	R2*
Sequence ID/ Work Center II 170 *170* QC Quality Control)	Operation Description QC8- Inspect parts - sec	ond check	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* Purchasing Purchasing		PURCHASING Memo	1883G	0.00 0.00 ANODIZE AS PER D	WC				PU 13-0	0 <u>+15</u>	

190

Receive & Inspect for Damage & Mat'l Certs

0.00

100 Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

/0/3/2/14 (4)

												DQA:	Date	<u>:</u> :
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORM	MANCE / UP	DATE		OA Classide	D-1-	
					-			T				QA Closed:	Date	2:
Work Ord	or.				i	DISPOSITION				AGAINS	T DE	PARTMENT	PROCESS	
Work Ord	CI.					Rework	٦		Skid-tube	Crosstub	- ا		Water Jet	Engineering
Part f	۷o			<u> </u>		Scrap	1	ſ	Machining	Small Fa	b		d. Eng. Coor.	Quality
NCR I	No				· · · · · · · · · · · · · · · · · · ·	Use-as-is Work Order Update			noforming Large Fab	Finishin Composit	~ }	Rec/Stor	re/Packaging Supplier	Other
Root					Descri	ption of work order update		Initial	Ac	tion		Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ct	nief Eng	Desc	ription		Date	Verification	QC Inspector
Doc/Data														
Equip/Tooling														
Operator														
Material														
Setup	Ш													
Other	Ш						}							
Process														
Supplier														
Training												•	i	
Unapproved														
						<u> </u>	AUI	LT CATE	GORY					
Landi	ng Ge	ear			.	General		,				,	_	· ·
	L	Bending				Bend		Grain				Ovalized		Pressure/Forced
	Щ°	entre No	ot Concer	ntric to (D/S	BOM/Route		Hardwa	re			Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		L	Part Incorre	ct L	Weld
	\vdash	crushed/	Crimped.			Burrs		4	ions Incomplete/	Unclear	Ĺ	Part Lost/Mi	ssing	Wrong Stock Pulled
	Щ	Cuffs				Contamination		Mainte				Part Moved		
	┷	leat Trea	t			Countersink		Mislabe	led		_	Positioned V		 1
		nspectio	n Strip in	Tube		Cut Too Short		Misread	I			Power Loss/Surge Other		
	Inspection Strip in Tube Ripples in Bend					Drill Holes		Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

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Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

Work Orde		269		*91	269*							Page 3
Revision ID:	646.9910 Strut			Accept	*N900	<u>0</u> 40	100) *	Setup	Start Stop		S1* S2*
Start Date: Required Date: Reference:	10/05/12 10/31/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item : Customer:	ID:						
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):		ate:			Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II 200 *200* QC Quality Control)	Operation Description QC5- Inspect part compl	eteness to step on W/O	Set Up/ Run Hours 0.00 Sw			Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
201 *201* SprayPaint Spray Painting		Memo PRIME AS I CARDINAL	PER DWG 4860-50 PRIMER BATC	0.00 0.00 CH: \25452				_ 4		Ø	Ø	A) 13.6-5
²⁰³ *203* _{QC}		QC14- Inspect Spray Pai	nt	0.00 (AS)	اع أدوات			44			_ .	

Quality Control

NCR:	Yes	1	No

WORK ORDER NON-CONFORMANCE / UPDATE $^{\mathcal{N}}$

DQA:	Date:	

											QA Closed:	Dat	e:
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part N	lo					Rework Scrap Use-as-is Work Order Update		N Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
TICK I				 		Work Order opudie	ן``		zarge rao			o a p p	
Root					Descri	ption of work order update	Init	tial	Act	tion	Sign &		
Cause	D	ate S	Step	Qty		or Non-conformance	Chief	f Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													i
Material													
Setup													
Other													
Process													
Supplier								ļ					
Training											·		
Unapproved											<u></u>		
			-			F	AULT (CATE	GORY				
Landi	ng Gear					General				_	-		···1
		ding			_	Bend	\vdash	rain			Ovalized		Pressure/Forced
	——	tre Not C	Concen	tric to (D/S	BOM/Route		ardwai			Over/Under	tolerance	Temperature/Cure
		⊣			Broken/Damaged	${f H}$	•	on Incomplete	<u> </u>	Part Incorre	- t	Weld	
	Crushed/Crimped. Burrs			Burrs	\vdash		ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled		
	├ ── ┤				Contamination .	Шм	ainte	nance		Part Moved			
	Heat Treat Countersink				Countersink	Шм	lislabe	led		Positioned V			
	Inspection Strip in Tube Cut Too Short				Misread Power Loss/Surge Other				Other				
	Ripples in Bend Drill Holes				Offset								
	Torque Waves in Extrusion Drawing				Out of Calibration								
	Turning Sequence Finish					Finish		ut of S	equence				
1						Folio	I lo	utcida	Dimensions				

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Work Ord October-05-12				*912	269*						Page 4
Item ID: Revision ID:	646.9910			Accept	*N900	040	100)* s	Setup Star	t *N	S1*
Item Name:	Strut								Stop	' *N	S2*
Start Date: Required Date: Reference:	10/05/12 10/31/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item I Customer:	D:					() /
Approvals:	Process P	lan:	Date:	Tooling:	n	ate:	_	F	Run Star	* *N	R1*
rpprovuis.				_ SPC (Y/N):		ate:			Stop		R2*
Sequence ID/ Work Center II	D	Operation Description Identify as per dwg & St	ock Location: <u>5713</u> 9	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 Packaging		Memo		0.00		6		_4x	-11.	hl. 13	-06-10
Packaging		***IDENTI	FY AS PER APICAL MP	P-120 BY STAMPING P#	AND REV***						^
²²⁰ * 220 *		QC21- Final Inspection	· Work Order Release	0.00		-			13	16/11	#
QC		Memo		0.00				-			

Quality Control

mf 13-6-10

NCR:	es / No				WORK ORDER NON-	CON	IFORN	MANCE / UPI	DATE			5
	-									QA Closed:	Dat	te:
Work Orde	er:				DISPOSITION	_			_	EPARTMENT,	,	
Part N	lo				Rework Scrap Use-as-is		ı	Skid-tube Machining noforming	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. e/Packaging	Quality
NCR N	lo			·····	Work Order Update]		Large Fab	Composite	j '	Supplier	
Root				Descri	ption of work order update	Ti	nitial	Act	ion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	n QC Inspector
Doc/Data												
Equip/Tooling												
Operator	'						•					
Material						1						
Setup												
Other	<u>, </u>											
Process								1				
Supplier			1 1									
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Unapproved												
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Landi	ng Gear				General					_	!	
	Bending			_	Bend	\vdash	Grain		_	Ovalized		Pressure/Forced
	Centre No	ot Conce	ntric to (D/S	BOM/Route	\vdash	Hardwa		<u> </u>	Over/Under		Temperature/Cure
	Cracks			ļ	Broken/Damaged	\vdash		on Incomplete		Part Incorred		Weld
	Crushed/Crimped			Burrs			ions Incomplete/l	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
ļ	Cuffs			<u> </u>	Contamination		Mainte		<u> </u>	Part Moved		
	Heat Trea			<u> </u>	Countersink	Щ	Mislabe		<u> </u>	Positioned V	ū	
	Inspection	•	Tube	<u> </u>	Cut Too Short		Misread	i		Power Loss/	Surge	Other
	Ripples in			<u> </u>	Drill Holes	Ш	Offset					
į	Torque W	aves in E	Extrusion	1	Drawing		Out of (Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

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Picklist Print

October-05-12 9:14:11 AM

Page 1

Work Order ID:

91269

Parent Item:

646.9910

Parent Item Name:

Strut

Start Date: 10/05/12

Required Date: 10/31/12

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP REV:A NEW ISSUE 12-09-19 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6R0.563 6061-T6 ROUND BAR .5	63	Purchased	No				f	10.0000		8.842105	3		

 Loc Qty
 Loc Code

 MAT
 10

 123218
 10

123483

12/12/19

4 Rt

NCR:	Yes / No				WORK ORDER NON-C	CONFOR	MANCE / UP	DATE			
									QA Closed:	Date:	
Work Ord	er:				DISPOSITION	1		AGAINST DE	PARTMENT,		1
Part f					Rework Scrap Use-as-is Work Order Update	4 1	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root			<u> </u>	Descri	ption of work order update	Initial	Act	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	ription .	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved	or										
					General	AULT CATE	GORY				
Landi	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Bend BoM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing						are tion Incomplete ctions Incomplete/ enance eled ad Calibration	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Turning	Sequence		i	Finish	Out of	Sequence				

Outside Dimensions

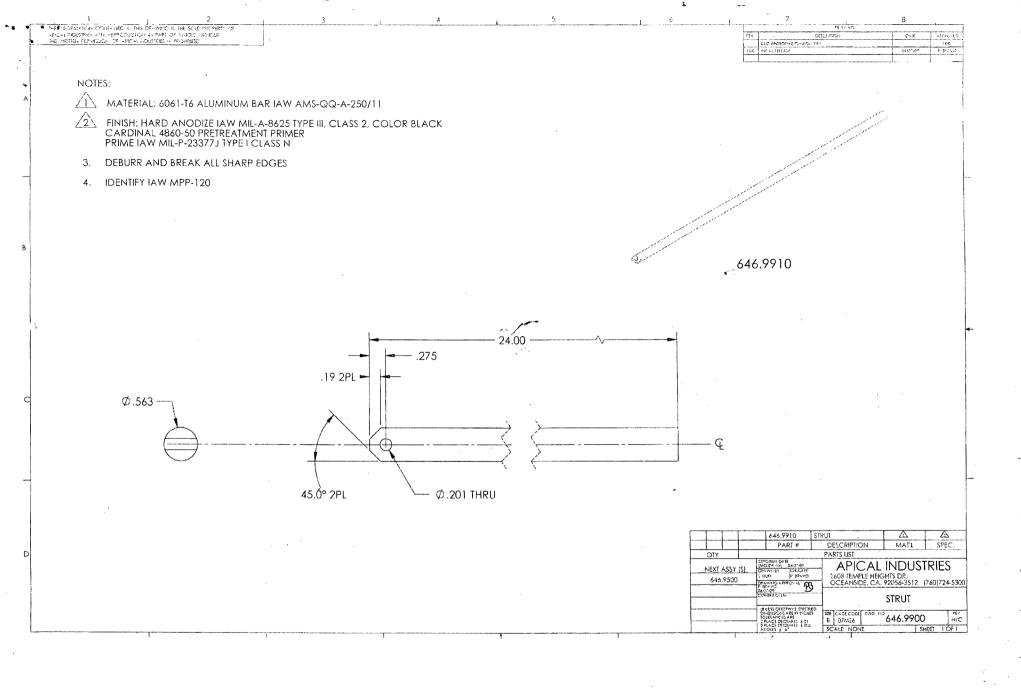
DQA:

Date:

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



DART AEROSPACE LTD	Work Order:	Work Order: 91269		
Description:	Part Number:	646,990		
Inspection Dwg: 646.9900 Rev: N/C		Page 1 of 1		

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.563	±.00≤	0.565			37-5	Vers
.19	0,0, ±	.190				
-275	2,005	.274				
0.201	±.005	0.20)				
	·					
24.00	610.	24002			24" 1	14
	h8-2					

Measured by:	2AQ)	Audited by:	al	Preliminary Approval:	
Date:	12/12/18	Date:	12/12/23	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	





A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

Pack List

Number: 62212

Date: 13-Feb-13

То

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via			
Quantity	Description				
	1 Part: ASST		Rev:		
lo	ot				
	4 PCS 647.2010		•		
	14 PCS-847:2011 -T	•			
	4 PCS 646.9910				
	4 PCS-047.1813 I	,		-	
•	3 PCS 647.7915				
	8 PCS 649.4816 170 PCS 646.9910	. 8			
	30 PCS 646.3715	,		***	
	4 PCS 647.7914	•	•	•	
	14 PCS 646.3713				
	41 PCS 649.4813 🗸		•		
	4 PCS 647 1910 🛩				
	16 PCS 646.9710				
	LIABE ANODIZE DI AOK			_	
	HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2		•	•	
	Job: 20130090	PO: PO18829	Line:	•	
	305. 20130090	1 0.1 0 10029	LIIIC.		
	Certificate of Co	onformance		•	
	A.T.G. Industries certifies that all item	s in this shipment are in co	nformance		
	with all requirements, specifications ar	nd drawings referenced in t	he purchase order.	4	3
*			•		
• •	ISO 9001 2008 RI				
	ATG SALES-2010	ERMS APPLY		•	
	DATE: 13/2/13				. *
				•	
	OFFICIER CLONATURE	•		•	
	CERTIFIED SIGNATURE:				
\$					
	RECEIVER SIGNATURE :				
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